1. (Amended) A cytometer apparatus comprising:

a rotating means adapted to receive and rotate a transparent cylinder along a longitudinal axis of the transparent cylinder;

a light source adapted to illuminate at least a portion of said transparent cylinder;

a detector adapted to detect a light signal provided by said light source and reflected from said transparent cylinder;

determining means for determining at least one cytometric characteristic of a sample disposed in said transparent cylinder based on said light signal; and

a movement means for moving said transparent cylinder and said light source and detector in a longitudinal axis relative to one another.

2. (Amended) The cytometer apparatus as set forth in claim 1, wherein said transparent cylinder comprises a bar code label affixed to an outer wall thereof, said bar code label adapted to be interrogated by said detector means.

3. (Amended) The cytometer apparatus as set forth in claim 1, wherein said transparent cylinder has an inner wall having calibration standards affixed thereon.

4. (Amended) The cytometer apparatus as set forth in claim 1, wherein said transparent cylinder comprises an inner wall having a photoactivated crosslinker affixed thereon.

10. (Amended) A spin cytometer, comprising:

a rotating means adapted to rotate a transparent cylinder about a longitudinal axis of the transparent cylinder;

a light source adapted to illuminate at least a portion of the transparent cylinder;

a detector means for detecting a light signal generated by the light source and reflected from the transparent cylinder;

determining means for determining at least one cytometric characteristic of a sample disposed in said transparent cylinder based on said detected light signal; and

a movement means for moving the transparent cylinder and the light source and detector means in relative motion.

12. (Amended) The spin cytometer of claim 11, wherein the rotating means is adapted to rotate the transparent cylinder between approximately 50 and 3000 revolutions per minute.

13. (Amended) The spin cytometer of claim 10, wherein the rotating means is adapted to rotate a transparent cylinder comprising:

a closed end;

an open end;

a cell guide member having a first side oriented toward the open end, a second side oriented toward the closed, and a passage from the first side to the second side; and

a cap adapted to seal the open end.

18. (Amended) The spin cytometer of claim 13, wherein an inner wall of said transparent cylinder comprises an organic photoreceptor material affixed thereon.

23. (Amended) The spin cytometer of claim 22, wherein the light emitting diode is adapted to emit a light having a wavelength of between approximately 500 nanometers and 100 nanometers.

24. (Amended) The spin cytometer of claim 10, wherein the detector means further comprises an analog to digital converter.

25. (Amended) The spin cytometer of claim 24, wherein the detector means further comprises:

an analog to digital converter; and

a processing means for associating a location identifier with an analog to digital converter output value, the location identifier identifying a location on a surface of the transparent cylinder at which the digital to analog value was obtained.

26. (Amended) The spin cytometer of claim 10, further comprising an additional one (1) or more light sources, each light source adapted to illuminate at least a portion of a transparent cylinder.

29. (Amended) The spin cytometer of claim 10, wherein the detector means comprises a photomultiplier.

30. (Amended) The spin cytometer of claim 10, wherein the detector means comprises a charge coupled device.